

THE OFFICE OF REGULATORY STAFF

DIRECT TESTIMONY

OF

MICHAEL L. SEAMAN-HUYNH

AUGUST 15, 2008



DOCKET NO. 2008-3-E

**Annual Review of Base Rates for Fuel Costs
of Duke Energy Carolinas, LLC**

DIRECT TESTIMONY OF

MICHAEL L. SEAMAN-HUYNH

FOR

THE OFFICE OF REGULATORY STAFF

DOCKET NO. 2008-3-E

IN RE: ANNUAL REVIEW OF BASE RATES FOR FUEL COSTS OF

DUKE ENERGY CAROLINAS, LLC

Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS AND OCCUPATION.

A. My name is Michael Seaman-Huynh. My business address is 1441 Main Street, Suite 300, Columbia, South Carolina 29201. I am employed by the State of South Carolina as an Electric Utilities Specialist in the Electric Department for the Office of Regulatory Staff ("ORS").

Q. PLEASE STATE YOUR EDUCATIONAL BACKGROUND AND EXPERIENCE.

A. I received a Bachelor of Arts Degree in History from the University of South Carolina in Columbia in 1997. Prior to my employment with ORS, I was employed as an energy analyst with a private consulting firm. In June 2006, I joined the Office of Regulatory Staff.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

A. The purpose of my testimony is to set forth ORS Electric Department's findings and recommendations resulting from our review of Duke Energy Carolinas, LLC's ("Duke" or "Company") fuel expenses and power plant operations used in the generation of electricity to meet the Company's South Carolina retail customer requirements. The

review period includes actual data for July 2007 through May 2008, estimated data for June 2008 through September 2008, and forecasted data for October 2008 through September 2009.

Q. WHAT AREAS WERE ENCOMPASSED IN YOUR EXAMINATION OF THE COMPANY'S FUEL EXPENSES AND PLANT OPERATIONS?

A. ORS reviewed various fuel and performance related documents as part of its evaluation. The information reviewed addressed energy generation and plant operation activities. In preparation for this proceeding, ORS reviewed the Company's monthly fuel reports including power plant performance data, unit outages, and generation statistics. Comparisons and analysis of actual to original estimates were performed for both megawatt-hour sales and fuel costs. ORS reviewed the Company's nuclear fuel, coal and transportation contracts. ORS examined the contracts for reagents such as ammonia and limestone. ORS also reviewed the Company's policies and procedures for fuel procurement. All information was examined with reference to the Company's existing Adjustment for Fuel and Variable Environmental Costs Rider and the Fuel Clause statute.

Q. WHAT ADDITIONAL STEPS WERE TAKEN IN ORS'S REVIEW OF THE COMPANY'S PROPOSAL IN THIS PROCEEDING?

A. ORS met with various Duke personnel representing a variety of areas of expertise to discuss and review Duke's fossil and nuclear fuel procurement, fuel transportation, environmental cost purchasing procedures, nuclear, fossil and hydro generation performance, plant dispatch, forecasting, resource planning, and general Company policies and procedures. These meetings occurred at Duke Headquarters in Charlotte, N.C. In addition, on a daily basis, ORS keeps abreast of the nuclear, coal, natural gas,

and transportation industries through industry and governmental publications.

Q. DID ORS EXAMINE THE COMPANY'S PLANT PERFORMANCE FOR THE REVIEW PERIOD?

A. Yes. ORS reviewed the Company's performance of its generating facilities to determine if the Company made reasonable efforts to minimize fuel costs. ORS reviewed the availability and capacity of the Company's power plants. Exhibit MSH-1 shows the monthly availability of the Company's major generating units stated in percentages. The corresponding capacity factors in Exhibit MSH-2 indicate the monthly utilization of each unit in producing power.

Q. PLEASE EXPLAIN THE SIGNIFICANCE OF PLANT AVAILABILITY AND HOW IT IS USED IN YOUR EVALUATION OF THE COMPANY'S PLANT PERFORMANCE.

A. Exhibits MSH-3 and MSH-4 show the Company's major fossil and nuclear units summary of outages for the review period, respectively. With reference to Exhibit MSH-1, in months where generation units show zero availability as well as those months showing less than 100% availability led us to examine the reasons for such occurrences. Exhibit MSH-1 through Exhibit MSH-4 should be used in concert to evaluate the Company's plant operations. As an example, Exhibit MSH-1 shows the Belews Creek Fossil Unit 1 had 0.00% availability in November and December 2007. Exhibit MSH-3 indicates the reason for the 0.00% availability was the scheduled maintenance outage between October 13, 2007 and January 26, 2008; therefore, the unit was not available to generate electricity during this time frame due to scheduled maintenance being performed.

1 **Q. WOULD YOU EXPLAIN HOW THE OTHER OUTAGES ARE REPRESENTED**
2 **ON EXHIBITS MSH-3 AND MSH-4?**

3 **A.** Yes. Exhibit MSH-3 provides explanations for major fossil unit outages of 100
4 hours or greater although our review includes all outages. While not included in this
5 Exhibit, fossil outages of less than 100 hours were also reviewed and found to be
6 reasonable by ORS. Exhibit MSH-4 provides explanations for all nuclear plant outages
7 during the review period.

8 **Q. PLEASE ADDRESS THE OUTAGES AT THE COMPANY'S THREE NUCLEAR**
9 **STATIONS.**

10 **A.** Exhibit MSH-4 shows the duration of the outages at the Company's three nuclear
11 stations by unit along with the explanation of the outage. ORS found that the Company
12 took appropriate corrective action with respect to these outages, and there were no
13 Nuclear Regulatory Commission fines associated with these outages. The seven nuclear
14 units combined achieved an overall 89.3% availability factor and 91.4% capacity factor
15 for the review period which includes scheduled refueling outages for five of the seven
16 units.

17 **Q. WHAT WERE THE RESULTS OF YOUR ANALYSIS OF THE COMPANY'S**
18 **PLANT OPERATIONS FOR THE PERIOD UNDER REVIEW?**

19 **A.** ORS's review of the Company's operation of its generating facilities resulted in
20 the conclusion that the Company made reasonable efforts to maximize unit operations
21 and minimize fuel costs.

22 **Q. DID ORS REVIEW THE GENERATION MIX AND BASE UNIT FUEL COSTS**
23 **UTILIZED BY THE COMPANY DURING THE REVIEW PERIOD?**

1 **A.** Yes. Exhibit MSH-5 shows the monthly generation mix for the review period by
2 generation type. The Company has no combined-cycle gas-fired generating units in its
3 fleet and uses its simple-cycle combustion turbine units sparingly during peaking periods
4 or when capacity is short and purchase opportunities are not economical. The
5 Company's load is mainly met through comparable portions of nuclear and coal
6 generation along with a small amount of hydro production.

7 In addition, Exhibit MSH-6 shows the average fuel cost in cents per kilowatt-hour
8 and generation in megawatt-hours for each of the Company's base load nuclear and coal-
9 fired facilities. The Oconee Nuclear Station had the least expensive average fuel cost at
10 0.423 cents per kilowatt-hour. Cliffside, a coal-fired plant, had the most expensive fuel
11 cost at 3.012 cents per kilowatt-hour. The highest total generation of 18,408,081
12 megawatt-hours was produced at the Oconee Nuclear Station.

13 **Q. HAS ORS REVIEWED THE ACCURACY OF THE COMPANY'S FORECAST?**

14 **A.** Yes. As shown in Exhibit MSH-7, the Company's actual megawatt-hour sales
15 versus forecasted sales varied by only 1.53% during the review period. In addition,
16 Exhibit MSH-8 shows the monthly variance between projected and actual fuel cost for
17 the review period. This Exhibit demonstrates that the Company was able to improve its
18 forecasted costs during five of the eleven months of the review period. Duke's projection
19 varied from the actual fuel cost by 4.25% for the review period.

20 **Q. DID ORS REVIEW ADDITIONAL INFORMATION IN DETERMINING THE**
21 **REASONABLENESS OF THE COMPANY'S FORECAST?**

22 **A.** Yes. ORS reviewed the forecasted maintenance schedules for the Company's
23 major generating units as well as the Company's forecasted fuel price for nuclear and

1 coal. ORS also reviewed the Company's load forecasting and dispatch procedures.

2 Based on the review, ORS finds Duke's forecast to be reasonable and appropriate.

3 **Q. WHAT OTHER INFORMATION HAS ORS REVIEWED IN MAKING ITS**
4 **DETERMINATIONS IN THIS PROCEEDING?**

5 **A.** Exhibit MSH-9 shows the ending balances of over and under collections of fuel
6 costs beginning November 1979. The Company has experienced both over and under
7 recovery balances throughout the approximate twenty-nine year period.

8 **Q. WHAT OTHER SOURCES OF INFORMATION DOES ORS USE IN**
9 **DETERMINING THE REASONABLENESS OF A UTILITY'S REQUEST FOR A**
10 **FUEL COST COMPONENT?**

11 **A.** ORS routinely 1) reviews private and public industry publications as well as those
12 available on the Energy Information Administration's ("EIA") website; 2) conducts
13 meetings with Company personnel; 3) conducts meetings with representatives of large
14 industrial energy consumers; 4) attends industry conferences; and 5) reviews information
15 as filed monthly by electric generating utilities on Form 423 with the Federal Energy
16 Regulatory Commission. An example of EIA data reviewed is included on Exhibit MSH-
17 10. Exhibit MSH-10 provides spot coal price data for a three year period and includes
18 the significant upward trend of the average weekly coal commodity spot prices for both
19 Central and Northern Appalachia beginning in early 2008. Duke generally obtains its
20 coal from the Central Appalachia region.

21 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

22 **A.** Yes, it does.

Office of Regulatory Staff
Power Plant Performance Data Report
Availability Factors (Percentage)
Duke Energy Carolinas, LLC
Docket No. 2008-3-E

PLANT	UNIT	MW RATING	HISTORICAL DATA			REVIEW PERIOD (ACTUAL) DATA											Average Review Pd.
			YEAR 2005	YEAR 2006	YEAR 2007	JUL 2007	AUG 2007	SEP 2007	OCT 2007	NOV 2007	DEC 2007	JAN 2008	FEB 2008	MAR 2008	APR 2008	MAY 2008	
CATAWBA	1 ¹	1129	91.75	80.77	99.65	100.00	100.00	99.96	100.00	100.00	99.97	100.00	100.00	99.97	100.00	6.45	91.5
CATAWBA	2 ²	1129	99.74	87.88	82.55	99.99	100.00	46.25	0.00	44.32	100.00	100.00	99.96	100.00	100.00	99.96	81.0
MCGUIRE	1	1100	90.96	100.00	78.37	100.00	100.00	100.00	100.00	100.00	100.00	99.93	100.00	100.00	100.00	99.92	100.0
MCGUIRE	2	1100	86.73	84.77	99.99	100.00	100.00	100.00	100.00	99.92	100.00	100.00	99.99	0.38	40.68	100.00	85.5
OCONEE	1	846	89.93	78.66	97.46	100.00	100.00	99.93	98.96	100.00	100.00	99.97	99.57	100.00	27.21	0.00	84.1
OCONEE	2	846	89.08	97.61	89.72	100.00	98.21	98.49	100.00	99.97	100.00	100.00	99.93	98.64	92.87	100.00	98.9
OCONEE	3	846	95.73	89.25	85.08	99.96	100.00	100.00	83.77	0.00	37.25	100.00	100.00	99.98	100.00	100.00	83.7
NUCLEAR TOT		6996	91.99	88.42	90.40	99.99	99.74	92.09	83.25	77.74	91.03	99.99	99.92	85.57	80.11	72.33	89.3
BELEWS CREEK	1	1135	83.17	81.98	73.20	99.67	95.55	89.49	39.00	0.00	0.00	5.17	98.82	99.21	92.37	99.62	65.4
BELEWS CREEK	2	1135	83.65	84.39	91.86	97.98	99.35	82.87	96.04	99.86	91.18	99.79	99.17	87.51	13.60	81.85	86.3
CLIFFSIDE	5	562	89.36	92.52	84.50	49.42	83.30	98.99	88.47	99.60	99.49	99.06	99.71	99.25	40.32	73.39	84.6
MARSHALL	3	658	88.24	66.73	87.05	78.27	94.33	69.47	87.93	80.77	96.58	90.24	99.70	90.55	99.51	95.02	89.3
MARSHALL	4	660	94.36	68.46	91.93	80.04	88.30	89.82	79.43	99.95	98.99	86.67	89.15	84.67	59.80	75.10	84.7
FOSSIL TOTALS		4150	87.75	78.82	85.71	81.08	92.17	86.13	78.17	76.04	77.25	76.19	97.31	92.24	61.12	85.00	82.1

Unit 1: North Carolina Electric Membership Corp. (56.25%), Duke Power (25%), and Saluda River Electric Coop., Inc. (18.75%)

Unit 2: North Carolina Municipal Power Agency No. 1 (75%) and Piedmont Municipal Power Agency (25%)

**Office of Regulatory Staff
Power Plant Performance Data Report
Capacity Factors (Percentage)
Duke Energy Carolinas, LLC
Docket No. 2008-3-E**

HISTORICAL DATA							REVIEW PERIOD (ACTUAL) DATA												
PLANT	UNIT	MW	LIFE ¹	YEAR	YEAR	YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	Average	
		RATING	TIME	2005	2006	2007	2007	2007	2007	2007	2007	2007	2007	2008	2008	2008	2008	2008	Review Pd
CATAWBA	1	1129	82.54	92.92	82.16	101.9	101.72	101.21	101.72	102.41	103.24	103.28	103.49	103.38	103.05	102.95	5.95	93.9	
CATAWBA	2	1129	83.32	102.15	88.78	84.4	101.92	101.49	46.73	0.00	44.35	103.81	104.01	103.74	103.55	103.19	102.33	83.2	
MCGUIRE	1	1100	75.90	93.15	103.49	79.6	101.56	101.46	101.36	102.70	104.45	105.03	104.83	105.17	104.77	104.34	103.74	103.6	
MCGUIRE	2	1100	82.86	88.77	87.57	103.5	102.27	101.41	101.78	103.03	104.54	105.22	105.43	105.52	0.00	41.15	104.93	88.7	
OCONEE	1	846	75.81	90.68	78.62	98.8	101.10	100.17	99.56	99.42	101.64	102.10	102.24	101.90	74.91	26.98	0.00	82.7	
OCONEE	2	846	78.26	90.00	99.71	91.4	102.63	99.83	99.65	101.85	102.87	102.94	103.58	103.36	101.90	95.73	102.29	101.5	
OCONEE	3	846	77.52	97.50	90.78	87.2	102.45	101.44	100.94	82.43	0.00	37.42	103.50	103.82	103.78	103.74	103.53	85.7	
NUCLEAR TOT		6996	79.46	93.72	90.17	92.39	101.94	101.06	92.19	83.18	81.41	95.80	103.95	103.93	83.74	83.53	75.17	91.4	
BELEWS CREEK	1	1135	n/a	84.09	76.27	66.7	91.40	90.04	81.67	37.27	0.00	0.00	2.16	93.48	95.21	89.05	94.42	61.3	
BELEWS CREEK	2	1135	n/a	84.41	79.29	84.4	84.18	94.10	78.37	91.09	95.69	81.88	96.23	92.39	81.18	12.08	74.99	80.2	
CLIFFSIDE	5	562	n/a	70.92	71.39	71.7	40.72	76.71	90.27	81.49	95.15	90.94	91.54	87.25	89.40	37.04	63.80	76.8	
MARSHALL	3	658	n/a	76.69	61.54	80.5	69.58	90.67	56.52	86.04	78.71	91.08	87.32	94.63	87.47	99.58	90.89	84.8	
MARSHALL	4	660	n/a	88.84	64.72	86.8	74.19	83.94	73.66	77.74	99.69	97.01	84.24	81.41	81.77	59.21	70.14	80.3	
FOSSIL TOT		4150	n/a	82.41	72.59	77.62	76.37	88.47	76.67	72.15	67.39	64.58	66.55	90.60	87.22	57.88	80.54	75.3	

¹The lifetime nuclear unit capacity factors are through December 2007

**Office of Regulatory Staff
Fossil Unit Outage Report
(100 Hrs or Greater Duration)
Duke Energy Carolinas, LLC
Docket No. 2008-3-E**

UNIT	DATE OFF	DATE ON	HOURS	TYPE	EXPLANATION OF OUTAGE
Belews Creek - 1	10/13/07	1/26/08	2536.15	Planned	Unit was taken offline for a planned major boiler overhaul
Belews Creek - 2	9/25/07	10/1/07	129.10	Forced/Planned	Unit was forced offline due to a tube leak Unit remained offline to repair a condenser leak
Belews Creek - 2	4/5/08	5/1/08	634.25	Planned	Unit was taken offline to tie in scrubbers
Cliffside - 5	7/5/07	7/20/07	361.45	Forced	Unit was forced offline due to desuperheater attenuator spray liner failure
Cliffside - 5	8/22/07	8/26/07	117.25	Forced	Unit was forced offline due to a boiler tube leak and closed condensation line leak
Cliffside - 5	4/4/08	4/22/08	422.34	Planned	Unit was taken offline for planned boiler maintenance
Cliffside - 5	5/7/08	5/13/08	152.70	Planned	Unit was taken offline for repairs to stop steam inlet feedwater leak
Marshall - 3	7/10/07	7/16/07	141.31	Forced	Unit was forced offline due to a tube leak and loss of scrubber demister
Marshall - 3	9/22/07	10/1/07	239.47	Planned	Unit was taken offline for planned fall outage
Marshall - 3	11/2/07	11/6/07	104.65	Forced	Unit was forced offline due to a tube leak
Marshall - 4	10/6/07	10/12/07	152.42	Planned	Unit was taken offline for planned fall outage
Marshall - 4	3/12/08	3/17/08	100.07	Forced	Unit was forced offline due to problem with hydrogen cooler
Marshall - 4	4/18/08	5/5/08	393.67	Planned	Unit was taken offline for planned spring outage

EXHIBIT MSH-3

**Office of Regulatory Staff
Nuclear Unit Outage Report
Duke Energy Carolinas, LLC
Docket No. 2008-3-E**

UNIT	DATE OFF	DATE ON	HOURS	TYPE	EXPLANATION OF OUTAGE
Catawba - 1	5/3/08	6/21/2008 ¹	1157.04	Planned	Unit was taken offline for scheduled refueling outage and various maintenance work
Catawba - 2	9/15/07	11/17/07	1497.08	Planned	Unit was taken offline for scheduled refueling outage and various maintenance work
McGuire - 2	3/1/08	4/17/08	1132.42	Planned	Unit was taken offline for scheduled refueling outage and various maintenance work
Oconee - 1	4/12/2008 ²	6/2/2008 ³	1219.43	Planned	Unit was taken offline for scheduled refueling outage and various maintenance work
Oconee - 2	3/31/08	4/2/08	50.03	Forced	Unit was forced offline due to automatic turbine trip caused by an indication of low condensor vacuum
Oconee - 3	10/27/07	12/19/07	1261.39	Planned	Unit was taken offline for scheduled refueling outage and various maintenance work

¹ Catawba 1 ended this outage after the end of the review period.

² Oconee 1 experienced a derating for the month of March 2008, due to a RCP cooler leak.

³ Oconee 1 ended this outage after the end of the review period.

Office of Regulatory Staff
Generation Mix Report (July 2007 – May 2008)
Duke Energy Carolinas, LLC
Docket No. 2008-3-E

<u>MONTH</u>	<u>PERCENTAGE</u>			<u>PURCHASED</u>
	<u>FOSSIL</u>	<u>NUCLEAR</u>	<u>HYDRO</u>	<u>POWER</u>
2007				
July	42.6	54.5	0.0	2.9
August	44.5	47.9	0.0	7.6
September	44.9	52.5	0.0	2.6
October	50.2	52.4	0.0	-2.6
November	49.4	50.9	0.0	-0.3
December	41.6	56.2	0.0	2.2
2008				
January	41.5	55.6	0.1	2.8
February	42.5	55.4	0.1	2.0
March	44.7	48.2	0.9	6.2
April	40.2	52.1	0.6	7.1
May	53.6	48.1	0.0	-1.6
Average	45.1	52.2	0.2	2.6

Office of Regulatory Staff
Generation Statistics for Major Plants
(July 2007 – May 2008)
Duke Energy Carolinas, LLC
Docket No. 2008-3-E

PLANT	TYPE FUEL	AVERAGE FUEL COST ¹ (CENTS/KWH)	GENERATION (MWH)
Oconee	Nuclear	0.423	18,408,081
Catawba	Nuclear	0.426	16,105,822
McGuire	Nuclear	0.432	17,049,483
Marshall	Coal	2.484	13,141,832
Belews Crk	Coal	2.591	12,942,420
Cliffside	Coal	3.012	4,090,592

1 The average fuel costs for coal-fired plants include oil and/or gas cost for start-up and flame stabilization.

Office of Regulatory Staff
SC Retail Comparison of Estimated to Actual Energy Sales
Duke Energy Carolinas, LLC
Docket No. 2008-3-E

	2007 JUL	AUG	SEP	OCT	NOV	DEC	2008 JAN	FEB	MAR	APR	MAY	TOTAL
[1] ESTIMATED SALES [MWH]	2,041,993	2,161,977	2,064,824	1,724,933	1,691,527	1,784,147	1,886,680	1,860,198	1,682,976	1,704,313	1,715,560	20,319,128
[2] ACTUAL SALES [MWH]	1,993,647	2,099,492	2,176,337	1,750,923	1,668,270	1,708,122	1,854,160	1,838,977	1,667,287	1,631,941	1,623,541	20,012,697
[3] AMOUNT DIFFERENCE [1]-[2]	48,346	62,485	-111,513	-25,990	23,257	76,025	32,520	21,221	15,689	72,372	92,019	306,431
[4] PERCENT DIFFERENCE [3]/[2]	2.42%	2.98%	-5.12%	-1.48%	1.39%	4.45%	1.75%	1.15%	0.94%	4.43%	5.67%	1.53%

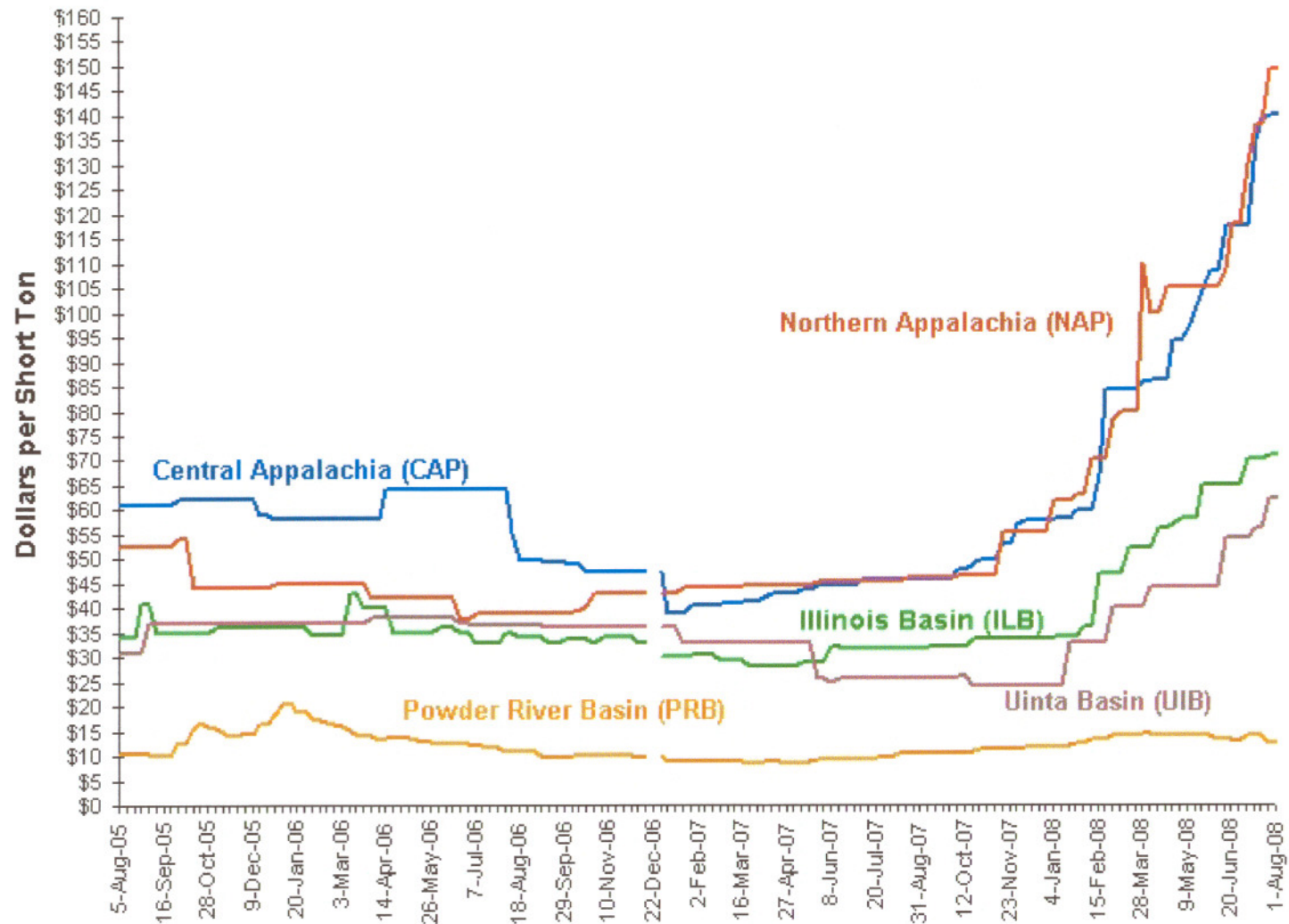
Office of Regulatory Staff
SC Retail Comparison of Estimated to Actual Fuel Cost
Duke Energy Carolinas, LLC
Docket No. 2008-3-E

	2007 JUL	AUG	SEP	OCT	NOV	DEC	2008 JAN	FEB	MAR	APR	MAY	PERIOD AVERAGE
[1] ORIGINAL PROJECTION (¢/kWh)	1.8968	1.8259	1.5225	1.6298	1.8211	1.8540	1.6959	1.5178	1.8304	1.7489	1.8415	1.7441
[2] ACTUAL EXPERIENCE (¢/kWh)	1.8644	2.8684	1.6694	1.7307	1.8269	1.4082	1.8619	1.3917	1.6618	1.7522	2.0009	1.8215
[3] AMOUNT IN BASE (¢/kWh)	1.8187	1.8187	1.8187	1.7457	1.7457	1.7457	1.7457	1.7457	1.7457	1.7457	1.7457	
[4] VARIANCE FROM ACTUAL [1-2]/[2]	1.74%	-36.34%	-8.80%	-5.83%	-0.32%	31.66%	-8.92%	9.06%	10.15%	-0.19%	-7.97%	-4.25%

Office of Regulatory Staff
History of Cumulative Recovery Account Report
Duke Energy Carolinas, LLC
Docket No. 2008-3-E

<u>PERIOD ENDING</u>	<u>OVER (UNDER)\$</u>
May 1979 - Automatic Fuel Adjustment in Effect	
November-79	1,398,442
May-80	11,322,948
November-80	4,588,331
May-81	(5,760,983)
November-81	(13,061,000)
May-82	(14,533,577)
November-82	(4,314,612)
May-83	20,915,390
November-83	14,192,297
May-84	18,245,503
November-84	14,478,363
May-85	2,551,115
November-85	(553,465)
May-86	(1,318,767)
November-86	(29,609,992)
May-87	(27,241,846)
November-87	(29,329,168)
May-88	(9,373,768)
November-88	6,544,914
May-89	6,067,739
November-89	11,372,399
May-90	15,421,968
November-90	2,939,303
May-91	17,068,483
November-91	21,265,000
May-92	21,080,856
November-92	11,553,801
May-93	16,959,555
November-93	221,606
May-94	6,609,897
November-94	1,037,659
May-95	5,088,619
November-95	(377,507)
March-97	(13,299,613)
March-98	(1,956,794)
March-99	13,044,443
March-00	26,703,441
March-01	20,367,528
March-02	(7,446,417)
March-03	(1,121,094)
March-04	11,424,295
June-05	(2,669,646)
June-06	6,984,672
June-07	1,632,482
May-08	(12,225,796)

**EIA Average Weekly Coal Commodity Spot Prices
Business Week Ended August 1, 2008**



Key to Coal Commodities by Region

Central Appalachia: Big Sandy/Kanawha 12,500 Btu, 1.2 lb SO₂/mmBtu
Northern Appalachia: Pittsburgh Seam 13,000 Btu, <3.0 lb SO₂/mmBtu
Illinois Basin: 11,800 Btu, 5.0 lb SO₂/mmBtu

Powder River Basin: 8,800 Btu, 0.8 lb SO₂/mmBtu
Uinta Basin in Colo.: 11,700 Btu, 0.8 lb SO₂/mmBtu